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PERINATAL LOSS: THE EFFECT ON  
ATTACHMENT IN SUBSEQUENT  
PREGNANCIES

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Presented by  
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Nursing Research II  
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### *Comfort the Bereaved*

*When earthbound  
days are done  
and loved ones  
go beyond,  
sometimes our Lord's promise  
for eternal life  
is hidden  
in grief  
and loneliness  
and strife,  
but a sympathetic nod,  
a note that says, "I care,"  
a gesture  
or a hand to hold  
will lift clouds  
of despair.*

by Alice Joyce Davidson



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## I. Abstract

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This was a retrospective, ex-po facto study. The purpose of the study was to explore the effect of perinatal loss on attachment behaviors in subsequent pregnancies. A modified version of Cranley's Maternal-Fetal Attachment Tool was utilized to measure the difference in attachment, during subsequent pregnancies, between mothers who had experienced a previous perinatal loss and those who had not. A Likert Scale was used to respond to the 44 statements comprising the tool. In addition, three open-ended questions were included to further clarify feelings, beliefs, and behaviors as they pertained to attachment. The sample consisted of 10 women; 5 in the study group and 5 in the comparison group. Subjects in the comparison group were matched with those in the study group, providing a more homogeneous sample. Three years was the average number of years since the loss and 16 months the average length of time between loss and subsequent pregnancy. Although there was no statistical significance in the findings measured by the attachment tool, the open ended questions provided insight into how attachment differs between the two groups. Women who had experienced a previous loss claimed some hesitation in forming attachment with their fetus/infant, feelings of anxiety lasting throughout the pregnancy and immediately following delivery, and the loss of the opportunity to participate in the joy and excitement normally experienced during pregnancy. Suggestions for future research are offered. / 17 ←

## II. Introduction

Although, death of an elderly individual or someone who has "lived a full life" is an accepted phenomena, in general, the idea of death, in our society, elicits feelings of uneasiness and fear. When a young child dies as a result of a terminal disease; in the midst of sorrow there is sometimes a sense of relief for the child has been alleviated of suffering. However, an unexpected death, especially that of a young adult or child, has devastating implications for the family, friends and the entire community. The unexpectedness leaves the survivors in shock and in a state of

disorganization and confusion. Of significance then, is the perinatal loss, for no one ever expects the death of a baby.

Rubin (1976) describes the state of pregnancy as "full of life" and "full of promise". A failed pregnancy, is a loss of dreams and expectations for the future. Caplan (1964) claims perinatal loss is significant because; 1) it is sudden and unexpected, the most difficult to resolve; 2) it interrupts the significant developmental stage of pregnancy and the situational crisis of loss is superimposed on the normal, maturational crisis of pregnancy; 3) it is a loss of a child who did not have an opportunity to live a full life; and 4) it prevents progression into the next developmental stage of parenting that has been anticipated and rehearsed during the pregnancy.

Over the last 20 years significant changes have been made in identifying the need for early bonding, whether it be with healthy newborns, infants not expected to survive or with demised infants. Many researchers (Bowlby, 1969, 1973, 1980; Kennell & Klaus, 1976, 1982; and Peppers & Knapp, 1980) have recognized the relationship between mothers who have bonded with their deceased infants and their later ability to resolve grief without pathological reactions. As a result of work done by these researchers, and others, efforts have been made to promote bonding with demised infants. Seeing, touching, and holding the baby enhances the attachment process. Photos, locks of hair, hospital bands, footprints, etc. promote a sense of reality and provides the parents with evidence that their child did indeed exist. A perinatal death is sometimes referred to as a "non-event" because the

process of birth and death are fused and parents have no tangible person to mourn. (Lewis, 1976, Bourne, 1968)

Recognition has been made regarding the need to recommend couples to wait at least one year, to allow time for completion of grief work, before attempting another pregnancy. Approximately one third of women who have experienced a perinatal death, suffer a morbid grief reaction, as reported by Cullberg, (1976) For as long as, one to two years, after the birth of their neonate these women developed severe psychiatric disorders. Pathological or morbid grief reactions have been associated with women who become pregnant before resolution of grief. (Giles, 1970, Cullberg, 1972, Rowe, 1978) Other studies have identified the concept of the "replacement child" who is born after the death of a sibling and "lives in the shoes" of the lost infant. (Poznanski, 1972)

Yet, with all the research thus far, there still seems to be a gap. We have insight as to what behaviors are elicited during and immediately following a perinatal loss and how subsequent children can be effected by the experience; but what about the behaviors and/or events surrounding the subsequent perinatal period? What behaviors exist during the subsequent pregnancy, at birth and during the immediate postpartum period which effect attachment to the fetus and later to the infant? Are there key concerns/issues particular to these mothers? Can Maternal-Child Health nurses identify early altered attachment behaviors and promote bonding with this special group of mothers?

### III. Significance to Nursing

As defined in the ANA Social Policy Statement (1980), nursing is the diagnosis and treatment of human responses to actual or potential health problems. These responses may include, but are not limited to; 1) emotional problems related to illness and treatment, life threatening events, or daily life experiences, such as anxiety, loss, loneliness and grief; 2) self-image changes; 3) dysfunctional perceptions; 4) strains related to life processes, such as birth, growth and development and death; and 5) problems in role-relationships. (p.10) Each of these responses are manifested when a couple experiences a perinatal loss.

Perinatal death can have a profound effect on parent's emotional, psychological, social, and physical well-being. Frequently, this particular type of crisis occurs in the early formative years. Since most young couples have yet to experience critical life crises at this point in their life, the event can result in a hinderance or halt in the family's development. (Peppers & Knapp, 1980, p.15) Kennell (1970) reported that there are more deaths in the first few days of life than at any subsequent time in childhood, almost all occur in a hospital. Rosenblatt (1986) claims that 10-20% of households contacted will report at least one perinatal loss. It is apparent then, that most, if not all of us, will be faced with assisting parents through the grief process. Health care providers are no different than anyone else in their hesitation to confront issues surrounding death, especially, the death of a child. However, despite their discomfort, parents look to them for guidance. Certainly the concepts



of comfort, education, advocacy, and crisis intervention are within the realm of nursing practice.

The manner in which the crisis is managed has a lasting effect on parents. Mismanagement of the situation may lead to pathological reactions and potentially to psychotic episodes which affect ability to maintain activities of daily living, including healthy role relationships. Maternal—Child Health nurses need to be cognizant of growth and development issues, developmental stages of families, affiliative processes, the normal grief process, and crisis theory and intervention. Astute understanding of these concepts will help identify a normal grieving process from dysfunctional patterns of behavior and thus provide direction for appropriate nursing interventions.

Maternal—Child Health nursing is focused on the 1) health needs of women, their partners, and their families throughout their reproductive and childbearing years and 2) children through adolescence. (ANA, 1980, p.4) It is then, the role of the Maternal—Child Health nurse, to assess maternal—child attachment as early as possible in order to detect alterations in behaviors and plan effective interventions which promote healthy relationship patterns. Attachment behaviors are present and active throughout the life cycle. The parent—child relationship is vital to the development of a child's personality (Brazelton, 1973). The affectional bonds that begin with parent and child later affect bonds between adult and adult (Bowlby, 1980 & Klaus, Kennell, 1976).

An altered grief process has the potential to have detrimental effects on role relationships with spouse, other family members, and friends. Although it is recommended for women not to attempt a subsequent pregnancy within the first year of the loss, most women do become pregnant within this time frame. (Rowe, 1978, Wilson, 1988) In cases of perinatal loss, if resolution of grief is not achieved prior to a subsequent pregnancy, then there is a distinct possibility that attachment behaviors will be altered. In order for resolution of grief to occur, a mother must detach herself from the infant; this is not possible unless attachment has taken place first. This is the main point behind encouraging bonding immediately during the postpartum period regardless of whether or not the baby lives. With resolution mothers can maintain, renew, and begin new relationships; one cannot simultaneously go through detachment and attachment processes. It is in this area that nurses can have the greatest impact on assisting parents to regain a state of equilibrium in their lives.

Goals of Maternal-Child Health, as stated in the ANA's Statement on the Scope of MCH Nursing Practice (1980), include; 1) promoting and maintaining optimal health of each individual mother, child and father during childbearing and childrearing phases of life; 2) improving and supporting family solidarity; 3) identifying and teaching vulnerable families; 4) preventing and detecting deviations from health and optimal development; and 5) assisting the family to understand and cope with developmental and traumatic situations that occur during childbearing and

childrearing. (p.9) These goal can be met by placing more emphasis on identifying mothers who are at greatest risk for poor maternal—infant attachment.

Klaus and Kennell (1976) became interested in examining maternal—infant bonding when intensive care nursery nurses observed and reported a trend in the number of failure to thrive and battered children; who had previously been premature and/ or sick neonates in their nurseries. These observations generated studies around the world and revealed significant association between early separation and subsequent development of failure to thrive and battered—child syndrome cases. The results of these studies may indicate the possible association between altered maternal—fetal/infant attachment, secondary to perinatal loss and later onset of neglect and/or abuse. Nurses are in the ideal position to identify these women who are unable to form maternal—fetal attachment and to alter their prenatal and postnatal care accordingly. They may benefit from nursing care focused primarily on the psychological rather than physisologic needs (Davis et al, 1987).

#### IV. Statement of the Problem

The focus of this study is to determine whether or not there are indeed differences in attachment behaviors between mothers who have had a previous perinatal loss and those who have had a positive outcome.

#### V. Operational Definitions:

1) Multigravida— A woman who has been pregnant and delivered, at least twice, and who has a living child or children.

2) Perinatal Loss—

- a) death of a fetus in utero (intrauterine fetal demise or stillborn)
- b) death of a neonate, never discharged from the hospital who died as a result of/or due to medical conditions surrounding the immediate intra/postpartum period (perinatal death).

3) Positive Perinatal Outcome— Delivery of a live neonate who is free of disease, anomalies or deformities.

4) Attachment Process—Planning a baby; acceptance of positive test results and the anticipated role of motherhood; pleasure in feeling the fetus move within the womb; understanding and accepting that the fetus as a separate individual; feelings of happiness and fulfillment in giving birth, seeing, hearing, touching, and, holding the newborn; and anticipation of and willingness to participate in the caretaking role. (as measured by the attachment tool)

5) Effect— Behaviors, attitudes or events which either promote or inhibit/delay the attachment process.

6) Variables—

a) Dependent Variable— Attachment behaviors.

b) Independent Variables— 1) perinatal loss  
2) positive perinatal outcomes

7) Groups

a) Study Group— Subjects who have experienced a previous perinatal loss.

b) Comparison Group— Subjects who have not not experienced a previous perinatal loss.

## VI. Conceptual Framework

It is human nature to make strong affectional bonds to certain other individuals and severance of these bonds may elicit such behaviors as emotional distress and personality disturbance, including anxiety, anger, depression and emotional detachment. Bowlby (1980) has conducted extensive research in the area of attachment and loss. Some of the concepts which are the foundation to his theory of attachment are:

- 1) Attachment behavior is conceived as any form of behavior that results in a person attaining or retaining proximity to some other differentiated and preferred individual.
- 2) It is distinct from feeding and sexual behavior yet it has an equal significance in human life.
- 3) During the course of a healthy development, attachment behavior leads to the development of affectional bonds or attachments, initially between child and parent and later between adults.
- 4) The goal of attachment behavior is to maintain certain degrees of proximity to, or of communication with, the discriminated attachment figure.
- 5) Many of the most intense emotions arise during the formation, the maintenance, the disruption and the renewal of attachment relationships. The formation of a bond is described as falling in love, maintaining a bond as loving someone, and losing a partner as grieving over someone. Threat of loss

arouses anxiety and actual loss gives rise to sorrow; while each of these situations is likely to arouse anger. The unchallenged maintenance of a bond is experienced as a source of security and the renewal of a bond as a source of joy. Because such emotions are usually a reflection of the state of a person's affectional bonds, the psychology and psychopathology of emotion is found to be in large part the psychology and psychopathology of affectional bonds.

6) Caretaking serves a complementary function, that of protecting the attached individual. (Bowlby, 1980, p.38)

Bowlby's theory of attachment derived from studies which were focused on the longterm effects of maternal separation on the child. On the other hand, Kennell and Klaus' (1976, 1982) studies emphasized attachment theory based on the affectional bond they observed between parents and their infant. Their focus was on how attachment grows, develops and matures and what disturbs, promotes or enhances it. "Perhaps the mother's attachment to her child is the strongest bond in the human". (Klaus & Kennell, 1976, p.1) They have identified observable attachment behaviors such as fondling, kissing, caressing, cuddling, and prolonged gazing. Through extensive observation and research of mother's interacting with their infants, Klaus and Kennell (1976) outlined seven principles governing the mother's attachment to her infant:

1— There is a sensitive period in the first minutes and hour of life during which it is necessary that the mother and father have close contact with their neonate for later development to be optimal.

2— There is a species—specific response to the infant in the human mother and father that are exhibited when they are first given their infant.

3— The process of attachment is structured so that the father and mother will become attached optimally to only one infant at a time.

4— During mother's attachment to the infant, the infant must respond in some way to the mother.

5— People who witness the birth process become strongly attached to the infant.

6— It is difficult to simultaneously go through attachment and detachment (develop attachment to one while mourning loss or threatened of the same or another person).

7— Early events have long—lasting affects. Anxiety regarding well—being of a baby, with a temporary disorder, in first day, may result in long lasting concerns that may cast shadows and adversely shape the development of the child (p.14).

It becomes evident that any one or all of these principles may be compromised with a perinatal death. The attachment process is ultimately interrupted.

Klaus and Kennell (1976) also describe nine steps, relative to pregnancy and birth, which occur during the attachment process. The first is planning the pregnancy, which for girls, begins in early childhood as they play house and fantasize about motherhood. As they grow into adults, women make conscious decisions about their desire for pregnancy: contraceptive use, plans for marriage, career versus family, or to have a child without marriage are all issues a woman must face. It has been observed that women who plan their babies attach more

readily to their newborn at birth and grieve more for their loss. (Peppers & Knapp, 1980, p.144)

The next two steps, confirmation and acceptance, really go hand in hand. If the pregnancy has been planned a positive confirmation elicits feelings of joy and almost immediate acceptance. If however, it is unplanned or undesired a positive pregnancy test can conjure up many confusing feelings and the need for careful decision making. For women with infertility problems, who are eagerly trying to become pregnant, each test result is anxiously awaited, negative results bring on feelings of failure and low self-esteem. There are two developmental changes which affect a women's acceptance of the pregnancy: 1) the physical and emotional changes within herself and 2) the growth of the fetus within her. Acceptance depends upon the desire to be pregnant and on the resources available (social, significant other, finances, etc.). With acceptance comes increased thoughts regarding what motherhood means.

The fourth and fifth step are feeling fetal movement and acceptance of the fetus as an individual. Quickening brings on increased awareness by the mother that another living being is growing within her. Her ability to recognize that this being is now dependent on her for life but will soon be born and be a separate individual is an important concept for her to accept. (Rubin, 1984) Lumley (1980) studied Australian women regarding their perceptions of the fetus as a real person and a baby. At 8-12 weeks only 30% of the women regarded the fetus as a real person, at



18–22 weeks this figure rose to 63% and at 36 weeks to 92% (in Klaus & Kennell, 1982).

The first five steps occur during pregnancy; the following four take place at and immediately following delivery. It is these last four steps that are interrupted when perinatal death occurs thus not allowing the attachment process to be completed. First with birth, the concept of motherhood becomes real. Secondly, seeing and hearing the baby; and thirdly, holding and touching the baby, enhances the completion of the attachment process. Finally, caretaking begins the “maternal–sensitive period” identified in the first of Klaus and Kennell's seven principles of mother–infant attachment.

The goal of attachment behavior, as defined by Bowlby (1980), is to maintain an affectional bond, any situation that seems to be endangering the bond elicits action designed to preserve it; and the greater the danger of loss appears to be the more intense and varied are the actions elicited to prevent it. (p. 42) He also claims that some of the most powerful forms of attachment behavior become activated, when bonding is prohibited, such as clinging, crying and perhaps angry coercion. These behaviors, he identifies as the phase of protest and one of acute physiological stress and emotional distress. “When these actions are successful the bond is restored, the activities cease and the states of stress and distress are alleviated. When efforts to restore bonds are not successful sooner or later the effort wanes, but does not cease. At increasingly long intervals, the effort to restore the bond is renewed: the pangs of grief and perhaps an urge to search are

then experienced afresh." (p.42) Bowlby (1980) suggests that attachment behaviors remain constant and for unknown reasons they can be reactivated with intensity. Through this study the researcher hopes to identify how these behaviors can cause disruption in a previous bond and thus affect subsequent perinatal attachments.

"A stressful event can become a crisis or be resolved, depending on a person's capacity to withstand stress, the degree of reality utilized and his/her repertoire of coping mechanisms". (Caplan, 1964, p.39) The loss of an infant is undoubtedly a crisis situation. Aquilera and Messick (1974) provide an explanation for the effects that a stressful event has on an individual's state of equilibrium. When a stressful event (perinatal death), impinges on a state of equilibrium (happy expectations of parenthood), disequilibrium occurs (confusion, disorientation, etc.) and the individual attempts to restore a state of equilibrium (put the event into perspective). When balancing factors such as; a realistic perception of the event, adequate situational support, and adequate coping mechanisms are present then there is resolution of the problem, equilibrium is regained and a crisis situation is prevented. However, when one or more of the balancing factors are absent; the problem is unresolved, disequilibrium continues and crisis exist. Perinatal death is such an event where one or more balancing factors are apt to be absent.

## VII. Review of the Literature

Some of the strongest supportive evidence that maternal attachment begins during pregnancy stems from research by Kennell et al (1970). He based his study on the premise made by Parkes (1983) that length and intensity of mourning after a loss

is proportionate to the closeness of the relationship prior to death. In his sample of twenty mothers who had experienced death of their newborns, he found that each one displayed identifiable mourning despite how long the infant did or did not live. The results of this study implied significant affectional bonding was established before or soon after death. Wong (1980) conducted her research with mothers who had lost an older child, yet her findings were similar. No matter how long the child survived, how many other children were left to care for or how strong the marital relationship was, all women grieved for the loss of the mothering role. Another observation made by Kennell (1970), in this study, was that longer and more intense mourning was evident in the women who planned their pregnancy and who had physical contact with their infant.

Another study by Kennell et al (1970) revealed similar grief responses to perinatal loss as those Lindemann (1944) described in acute grief over loss of loved adults. Kennell's study consisted of twenty-four mothers who lost infants in the first twenty-four days after birth. These women had common symptoms such as sadness, loss of appetite, insomnia, pre-occupation with thought of the infant, irritability, and loss of normal behavior patterns. (Klaus & Kennell, 1976) Results of this study are consistent with Lindemann's (1944) description of acute stages of grief. His research was based on bereaved adults who lost relatives in the Coconut Grove Fire. He identified five levels of grief: 1) somatic distress such as sighing, shortness of breath, fatigue, digestive complaints, and tightness in the throat; 2) pre-occupation with the image of the deceased; 3) guilt and continuing search for

evidence of failure to do the right thing in regard to the deceased; 4) hostile reactions, including irritability, loss of warmth, and the wish to be alone; and 5) loss of patterns of conduct, disorganized behavior manifested in talkativeness, restlessness, and an inability to initiate and maintain organized activities. The conclusions of his study were that there existed three areas of concern for management of grief: 1) the five common levels of grief; 2) the fact that grief is complex and intense; and 3) that people will grieve until they complete grief work.

Peppers & Knapp (1980) through their research identified three categories of grief related to perinatal death: 1) emotional and/or psychological— manifested with denial, guilt, confusion, anger, resentment, bitterness, depression, sadness, failure, and pre-occupation with thoughts of the deceased; 2) physical— decreased appetite, blurred vision, headache, sleep disturbance, palpitations, and exhaustion; and 3) social— withdrawal from participation in normal activities and social isolation.

According to Bowlby (1980) a normal recovery from a loss involves taking in what has happened, and sorting out mixed feelings and lost hopes so that memories of the dead recede to a healthy perspective. Cullberg (1972) reported that neurotic, phobic, depressive, or hypochondriacal reactions may continue from the first experience thus suggesting the potential for interactions with the next baby to be affected. When there has been failure to mourn a stillbirth, Lewis (1978) has found that "serious and bizarre reactions may occur unexpectedly, after the birth of a healthy subsequent baby" (p.238). Yet, another report, provides insight into the possible affects a perinatal loss has on subsequent pregnancies. Bourne and Lewis

(1984) revealed that postpartum psychosis, after a perinatal death, which require admission to a psychiatric unit is not common, but, such conditions are much more likely to occur following the next livebirth. A healthy mourning pattern involves "taking-in" or "holding-on" to memories or images of the dead person which allows the survivor to put the event in perspective and provides a sense of reality. Once the this step has occurred, acceptance follows and enhances the ability to "let-go", detach from the deceased. Resolution of grief is facilitated when this process of "taking-in" and "letting-go" is complete.

The majority of the studies, relative to perinatal loss and subsequent pregnancies, focus on: care of the parents during and immediately following the loss; timing for attempting another pregnancy; and the effects on the mother following the loss of one twin when the second survives. (Cullberg, 1972, Peppers & Knapp, 1980, Lewis, 1978, Bourne & Lewis, 1984) There has not been any research done with respect to attachment behaviors during their subsequent pregnancies, yet, it has been documented that there are serious psychological implications for the mothers that occur with the death of their infant, during the next pregnancy or birth of the next child. Although the normal grieving process may take up to one year to be complete and the recommendation is for women not to plan the next pregnancy for a period of 6-12 months, most women will attempt to become pregnant prior to or within this time frame, often interrupting their ability to complete grief work.

Rowe, (1978) conducted a retrospective study of 26 families from the University of California San Francisco Medical Center who had experienced a

perinatal death. The deaths included seven stillbirths, nine deaths associated with congenital anomalies, and ten deaths associated with prematurity and complications of the newborn. He used telephone interviews with open-ended questions to elicit responses regarding the information provided at the time of death, the health care providers, supportive measures and any major changes in the family since the death to include a new pregnancy. He found that fifty-four percent (54%) of the 26 mothers had become pregnant within 10-22 months following their infants' death. Eleven of sixteen mothers (69%) without living children became pregnant during this time frame where as only two of ten (20%) who had other living children became pregnant. Morbid grief reactions were evident in six of the twenty-six mothers, all had had a subsequent pregnancy closely following the death of a neonate. Statements such as, "I can't get close to my new baby. I keep a photograph of the stillborn baby on the mantel. I don't plan on ever getting over it. I want to kill myself I feel so bad." were common among these women. The significant time period was a subsequent pregnancy within five months after the death although morbid grief responses were elicited from mothers whose subsequent pregnancy fell more than six months later. Twenty three percent (23%) of the mothers interviewed in this study were felt to have morbid and prolonged grief reactions 12 to 20 months following the infant's death. An early subsequent pregnancy or a surviving twin were believed to be the significant factors relative to this finding. Rowe suggested further investigation in defining whether the presence

of an early subsequent pregnancy interferes with the grieving process or whether it is a reflection of the severity of the parents' grief.

Wilson (1988) examined responses regarding the perinatal period, from parents who had an infant subsequent to a stillbirth. His sample size was sixteen, eight in the study group and eight in the comparison group. All participants in the study group were from a self-help support group and had participated in earlier research projects. A social worker conducted the semi-structured interviews in family's homes at a little over two years post birth of subsequent babies. The subsequent babies, for both groups, were born approximately 19-20 months following previous births (stillborn or liveborn). The results of this study revealed that most mothers who have experienced a perinatal loss will plan their next pregnancy but worry and have mixed emotions regarding the outcome. Nightmares and feelings of not wanting to get "too involved" were reflected. In the comparison group mothers began preparations for the new baby at least one month prior to delivery but for the study group this activity did not take place until two weeks prior to delivery and for half of them not until after the actual birth. There was no significant finding in the immediate responses of the parents to the birth itself, the groups equally expressed feelings of joy. Despite the initial joy they felt, the study group expressed more feelings of fearfulness, ambivalence, hesitance and nervousness with their new baby. Many, reflected feelings of guilt, numbness, fear of attachment, and comparison of the new baby to the previously lost one. Significantly more study group mothers felt their previous experience affected their interaction with their newborn; spending

more time with them, holding, and attentiveness to fussing. Some claimed they were more lenient, less demanding, had fewer expectations and were more likely to "give in to" their next baby. These mothers also said they had higher expectations of themselves, were more protective of their babies and felt a greater responsibility in their parenting role. Nearly all mothers felt that their new baby helped them with their grief.

Although parents were interviewed close to 4 years post stillbirth only one mother believed she had gotten over it. "Mothers conceived at a mean of 10 months following their loss. Their responses therefore may be more exaggerated than those who further postponed conception." (Wilson, 1988, p. 191)

Contrary to Cranley (1981) who reported no relationship between maternal attachment and level of anxiety, Avant (1981) and Gaffney's (1986) studies did reveal a significance between the two. Avant, 1981, used a sample of 30 normal, healthy primigravidas to determine the relationship between maternal attachment and anxiety. She utilized the Taylor Manifest Anxiety Scale to measure level of anxiety and a modified version of a tool developed by Klaus and Kennell to measure maternal attachment. The data was collected on the first and third postpartum day. Although the purpose of this study was to assess whether or not there was a relationship and if so did it change during postpartum hospitalization; it did reveal significant findings which could be conducive to application in this study. Mothers who scored high on the anxiety scale also scored low on the attachment assessment. Considering these subjects had "normal" pregnancies, yet some mothers had increased anxiety levels



affecting attachment behaviors, it could be assumed that high risk pregnancies, prone to increased anxiety, are more vulnerable to poor attachment behaviors.

Borg (1981) claimed that a failed pregnancy was "so traumatic it could cause severe anxiety with another pregnancy". (p.131) She also suggested that despite the length of time between the loss and subsequent pregnancy there is still a considerable amount of worrying; some live in sheer terror. She concluded, through her observations, that these women have an overpowering fear of experiencing the same hurt. Many mothers give up activities/events in which they participated in with the first pregnancy. Others will buy an all new maternity wardrobe; refrain from talking about or planning for the pregnancy; delay setting up the nursery; and/or demand a Cesearen birth, if the first was vaginal. (Borg,1981)

The only research study, the author found, which is closely related to the subject at hand was done by Swoiskin—Schwartz *et al* (1988), as they studied parent's view about having a child after a SIDS death. They, as did this author, found copious amounts of work done in regards to the etiology and management of the crisis but little on the survivors over a period of time. This was an ex po facto design in which thirteen couples were personally interviewed in a semistructured fashion. Although the purpose of this study was to determine parental feelings surrounding the decision for a subsequent pregnancy, not on attachment; it did provide insight into some possible concepts common to mothers who have suffered a perinatal loss. The conceptual framework utilized were the key transitional points of long—term adaptation developed by Zebal and Woolsey (1984). Nine of the

thirteen couples were anxious to get pregnant as soon as possible, all did so within the first year. Regarding confirmation of the subsequent pregnancy they found that there was an equal distribution of responses reflecting confidence in the decision to become pregnant again. Therefore, even though most couples anxiously wanted to be pregnant, when faced with the reality of a positive test, there was some doubt. All, but one, however did express excitement. The birth of the subsequent child occurred one to three years for nine of the couples, four within the first year. All parents expressed mixed feelings, both positive and negative. As there was confirmation of survival of the subsequent child, usually when the child's age surpassed that of the SIDS infant, the majority of the parents began to feel more relaxed.

#### VIII. Hypotheses:

- 1) There will be a difference in the attachment processes between mothers who have had a previous loss and those who have not.
- 2) The more recent the loss, the greater the effect will be on the attachment process.
- 3) The most significant difference between the two groups will be in the intrapartum and postpartum periods.

#### IX. Research Question:

Does a previous perinatal loss effect the attachment process in the subsequent pregnancy?

## IX. Methodology:

### A. Research Design

The investigation was retrospective, all subjects had already delivered their subsequent infants and were asked to reflect back upon their feelings, beliefs, attitudes during their last pregnancy as they related to attachment behaviors. The independent variables could not be manipulated; either a mother had or had not previously lost an infant, therefore this was an ex—po facto design. The researcher's goal was to discover the relationship between previous perinatal loss and the attachment process with subsequent pregnancies making this study exploratory in nature. As this is essentially an uninvestigated topic thus far, it was therefore conducive to this type of research design (Polit & Hungler, 1983). A Likert Scale and open ended questions were utilized to elicit data regarding maternal—fetal/infant attachment.

### B. Study Population and Sample—Setting

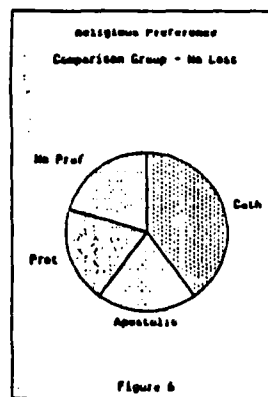
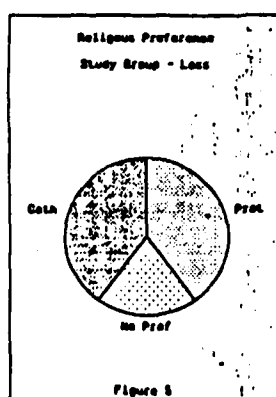
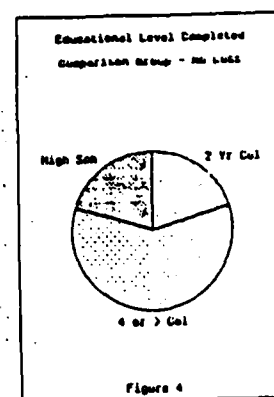
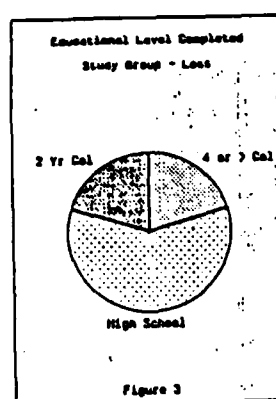
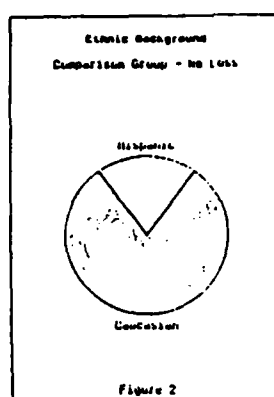
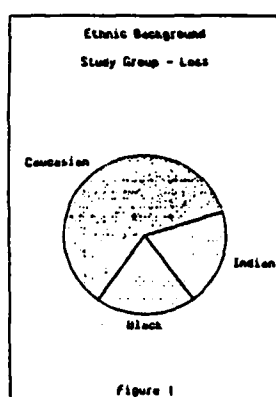
The target population were mothers who had experienced a perinatal death, either stillbirth or loss of an infant as a result of death secondary to medical conditions surrounding the intra/postpartum period, who had since been pregnant and delivered a healthy newborn. Selection of the subjects for the study was conducted through a non—randomized, sample of convenience. Participants were initially solicited from various sources; support groups such as Compassionate Friends, Birth Loss Support Group, Mothers of Stillborns, etc. and various geographical locations: Worcester, Massachusetts; Portsmouth, New Hampshire; and Elliot, Maine. Personal

contacts and the snowball effect were also utilized as a means to obtain an adequate sample size.

Actual participants in the study were the result of recommendations from the Birth Loss Support Group in Worcester, Massachusetts, personal contacts and the snowball effect. Questionnaires were sent to ten women who met the requirement for participation in the study group and to eight women meeting requirements for the comparison group. All women had verbalized a willingness to participate in the study prior to the questionnaires being sent. The response rate was 50% for the study group and 88% for the comparison group. Ultimately, the population sample consisted of ten mothers; five in the study group and five in the comparison group. The process of matching was accomplished to provide a more homogeneous sample population (Polit & Hungler, 1983). Subjects from the comparison group were matched with the study subjects, in regards to ages of children and number of viable pregnancies. Two of the respondents for the comparison group were eliminated; one due to the fact that her subsequent pregnancy was complicated and involved transport of her infant, disrupting the attachment process and the other was not required secondary to not having a matched subject in the study group.

All participants were married and the average age of the study group was 29 and 30 for the comparison group. Ethnicity and education were not evenly represented within the two groups. In regards to ethnic background, 60% of the study group was Caucasian, 20% Black and 20% American Indian whereas,

the comparison group consisted of 80% Caucasian and 20% Hispanic. Educational preparation among the study group was 60% high school and the other 40% has either two or four years of college. In contrast, the comparison group had 20% high school preparation and 80% with two, four or more years of college. Religious preference was evenly distributed between the two groups: the study group included 40% Protestant and 40% Catholic; and the comparison group included 20% Protestant, 40% Catholic and 20% Apostolic; and each group reported 20% as having no religious preference. (see Figures 1-6) Matching for ages of children and number of viable births was successfully accomplished. Average ages of living children for the study group was 3.6 and 3.5 for the comparison group. Each group had an average of 2.8 viable pregnancies.



Women with previous losses had the following obstetrical histories. The first subject was a gravida four who experienced a fetal demise at 22 weeks with third pregnancy. The second, was an infertility patient who miscarried her first pregnancy, and lost her second to a neonatal death at 25 weeks. This particular patient adopted two children prior to successfully delivering a healthy newborn. An anencephalic, born to a gravida six, was the cause of the neonatal death experienced by the third subject, it was her second viable pregnancy. The fourth subject was a gravida six who had two early miscarriages, two neonatal deaths, one at 23 weeks and the other 17 months later at 28 weeks, before delivering a healthy, living infant. The final subject lost her first pregnancy to a stillbirth, at term. The number of years since the loss was approximately three years. The length of time between loss and the subsequent birth was on an average 16.4 months, consistent with Rowe (1978) and Wilson (1988) who reported that women will become pregnant within the first year following their infant's death. The average number of living children for this group was 1.6 compared to the comparison group who had 2.4 living children.

### C. Data Collection Tool

A modified version of Cranley's Maternal Fetal Attachment Scale was utilized for this study. Cranley's (1981) original tool, the Maternal Fetal Attachment Scale, was a 24 item Likert scale, used to measure prenatal maternal-fetal attachment. The researcher adapted this scale, with permission, in order to incorporate attachment behaviors which extend beyond the prenatal period.

The additional 20 items were derived from the nine steps involved in the attachment process, concepts identified by Klaus and Kennell (1976). Cranley (1981) eliminated nesting behaviors from her original tool because her research found that these behaviors demonstrated no reliability ( $\alpha=.12$ ), all mothers participated in these activities. These behaviors dealt with mothers setting up nurseries, purchasing baby clothes, and general preparation for the birth of the baby. The nesting behaviors were included in this study due to the fact the researcher expected to find significant differences between the study groups, relative to this behavior.

The Cronbach's alpha coefficient of reliability for the 24-item scale had ranges from .52 to .73 which Cranley (1981) accepted as high internal consistency for her tool. The tool also revealed validity in that it was statistically showed that the subscales measured different aspects of the construct of maternal-fetal attachment (Cranley, 1981).

The modified scale consisted of 44 statements pertaining to attachment behaviors during pregnancy, at birth and during the first few hours after birth. Participants were asked to the statements utilizing a Likert Scale, five being the most positive response and one being the most negative. Three open ended questions were asked at the end of the questionnaire which required the respondents to reflect upon their last two pregnancies and compare them. The 44-item modified version was reviewed for content validity and accepted by a Boston College Professor of Nursing, for the Maternal Child Health Masters Program; a Perinatal Clinical Nurse

Specialist; and an Obstetrical staff nurse who has worked in the specialty for twenty years.

#### D. Data Collection Procedure

Subjects were solicited from sources as mentioned previously. The two subjects from the Birth Loss Support Group were asked by their facilitator if they were interested in participating in the study. The facilitator then forwarded names, addresses and phone numbers to the researcher. The other subjects were personal contacts of the researcher or women referred to the researcher by one of the personal contacts. Each subject was called personally by the researcher. The nature and purpose of the study was explained, confidentiality was guaranteed and subjects were reassured that they may discontinue participation at any time. Each subject was mailed the questionnaire, a cover letter with instructions for returning the questionnaire, and a self addressed, stamped envelope. The name and phone number of the researcher was provided to each participant, with permission to call collect if any concerns or questions developed.

When questionnaires were returned, the researcher matched the comparison group with the study specifically in regards to ages of children and number of viable pregnancies. By utilizing these criteria for matching the two groups, mothers in the comparison group were measuring their attachment in the same manner and sequence as the study group. For example, if a mother in the study group had had two healthy children prior to her loss and a healthy viable infant subsequent to the loss, she would be comparing attachment behaviors between the third and fourth



pregnancy. Likewise, the mother in the comparison group would be a gravida four, who is comparing her third and fourth pregnancies. Ages of the children were considered so that both groups experienced approximately the same lengths of time between the pregnancies they were comparing.

#### XI. Data Analysis

A parametric statistical test, t-test for independent samples, was utilized for measuring the difference in mean responses, between the two groups. The first comparison was made in regards to the entire attachment process, as measured by the tool. The second group of comparisons were made to analyze each of the nine steps in the attachment process, as identified by Kennell and Klaus (1976). This step was used to determine if there were specific steps within the attachment process, rather than the entire process, which were effected by a previous loss. Finally, the 44 items were divided into Prenatal and Intra/Postpartum subgroups for comparison of responses and to test the third hypothesis.

Predicting that the comparison group would score higher on the attachment scale the first hypothesis was generated. The hypothesis, that there would be a difference in the attachment processes between mothers who had a previous loss and those who did not, was not supported ( $t=.89$ , NS). Mean score for the comparison group was 178 and for the study group, 165. These results indicated that there was no difference between the two groups in regards to the attachment process.

To evaluate the process more in depth, the researcher divided the 44 items on the questionnaire into nine subcategories, congruent with the nine steps of the attachment process identified by Kennell and Klaus (1976). (see Table 1)

Table 1. Subcategories of the Attachment Tool

Step	Question from Tool
1. Planning:	1. I was anxious to get pregnant again. 2. This pregnancy was planned.
2. Confirmation:	3. I was pleased to find out that I was pregnant
3. Acceptance:	4. I felt the trouble of being pregnant was worth it. 5. I did things to try to stay healthy that I would not have done if I weren't pregnant. 6. I ate fruits and vegetables to be sure my baby got a diet. 7. I gave up certain things because I wanted to help my baby. 8. I felt as though my body was ugly. 26. Before the baby was born I fixed a room for him/her. 27. Before the baby was born I bought toys for him/her. 28. I waited until after the baby was born to buy some baby clothes. 29. I cleaned the house more thoroughly and stocked up with food for after he/she arrived. 30. I got most of the things I needed for the baby right after he/she was born. 41. While pregnant I imagined myself feeding the baby. 42. While pregnant I imagined myself caring for my baby..
4. Fetal Movement	9. I couldn't wait to feel the baby move. 10. I poked the baby to him/her poke back. 13. I enjoyed watching my tummy jiggle as the baby moved. 23. I grasped the baby's foot to make it move.
5. Acceptance as an Individual	11. I stoked my tummy to quiet the baby when there was too much kicking. 12. It seemed the baby kicked and moved to tell me it was time to eat. 14. I talked to my baby. 15. I wondered if he/she felt cramped inside. 16. I referred to my baby by nickname. 17. I could almost guess what my baby's personality would be like by the way he/she moved. 18. I had decided on a name for a girl. 19. I wondered if the baby could hear inside. 20. I decided on a name for a boy. 21. I wondered if the baby could think and feel inside. 22. I tried to picture what the baby would look like. 24. I could tell when the baby had hiccoughs.
6. Birth	25. I couldn't wait till the baby was born. 31. I was anxious about the delivery. 32. I had nightmares about labor and delivery. 33. The birth of my baby was a happy experience.
7. Seeing/Holding	34. I felt as though he/she were mine the moment I heard the cry. 35. I really looked forward to seeing what the baby would look like. 36. I wanted to see him/her right away. 37. I felt as though he/she were mine the moment that I saw him/her.
8. Holding/Touching	38. I wanted to touch him/her right away. 39. I couldn't wait to hold him/her. 40. I felt as though he/she were mine the moment that I held him/her.
9. Caretaking:	43. I eagerly wanted to begin caring for my baby. 44. After delivery I wanted to keep him/her with me.

Planning the pregnancy, is the first step of the process. Based on studies (Rowe, 1978 & Wilson, 1988) indicating that mothers who have experienced a previous loss will become pregnant within the first year following the loss, it would be expected for the study group to plan their pregnancies more than the comparison group. Although the mean for the study group was slightly higher, 8.2 compared to 7.4, the results were insignificant ( $t=.54$ ). Similarly the second step, confirming the pregnancy, would be a step within the process in which the study group would be expected to score higher since confirmation of pregnancy for someone who is planning a pregnancy would elicit positive feelings. However, there was no significant finding ( $t=.22$ ).

Acceptance of the pregnancy is the third step. Although acceptance is frequently dependent upon whether or not the pregnancy was planned, with women who have experienced a previous perinatal loss, even if they did plan the pregnancy, it is often difficult for them to accept it, for fear they will experience another loss. Therefore, the researcher expected to see a significant difference between the two groups in this regard, yet there was no significant finding ( $t=.60$ ).

The fourth step in the process is fetal movement, which begins with quickening and continues throughout the pregnancy. Since women who have had a loss are much aware of the significance of how fetal movement is a reflection of fetal well-being one may predict that it would be this group who would respond more

positively. However, once again the hypothesis was unsubstantiated, there was no significant finding between the two groups relative to fetal movement ( $t=.28$ ).

Accepting the fetus as an individual, the fifth step, entails such concepts as naming the baby, picturing what it would look like, and wondering if it could hear, feel or think inside the womb. Borg (1981) claimed that in subsequent pregnancies women worried considerably and had an overpowering fear of experiencing the same hurt. Therefore, this might suggest that women in the study group would have difficulty in accepting the fetus as a separate person for fear they may lose him/her. The mean score for the comparison group was higher, 46 compared to 41 in the study group but the results were not statistically significant ( $t=1.03$ ).

The last four steps are the ones generally interrupted with a perinatal loss and these negative feelings could iminge upon the subsequent pregnancy. The sixth step, birth, did not have any significant differences between the groups ( $t=.42$ ). Seeing and hearing, the seventh step and holding and touching the eighth step, involve feelings and attitudes within those first few moments after the birth of the baby. Although niether of these two steps revealed significant findings, ( $t=1.36$  and  $t=1.17$  respectively) the mean scores were higher in the comparison group. In regards to seeing and hearing the baby the mean score for the comparison group was 18.8 and 16.2 for the study group. Touching and holding elicited a mean score of 14.4 for the comparison and 12.4 for the study group. Lastly, is the actual caretaking of the infant following birth. Here too, there were no significant differences between the two groups ( $t=.43$ ). (See Table 2 and Figure 7 for summary of these results)

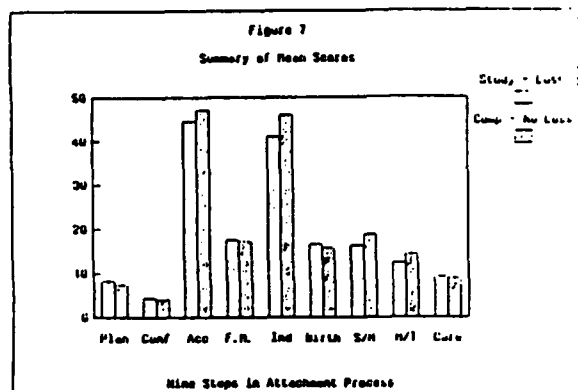


Table 2. Summary of the Attachment Process

Attachment	Hypothesis	t Value	p
Overall Attachment	Comparison > Study	.69	n.s.
Planning	Study > Comparison	.54	n.s.
Confirmation	Study > Comparison	.22	n.s.
Acceptance	Comparison > Study	.66	n.s.
Fetal Movement	Study > Comparison	.20	n.s.
Acceptance of Fetus as an Individual	Comparison > Study	1.63	n.s.
Birth	Comparison > Study	-.42	n.s.
Seeing & Hearing	Comparison > Study	1.36	n.s.
Holding & Touching	Comparison > Study	1.17	n.s.
Caretaking	Comparison > Study	-.43	n.s.
Prenatal	Comparison > Study	1.14	n.s.
Intra/Postpartum	Comparison > Study	.25	n.s.

Hypothesis two, the more recent the loss the greater the effect could not be tested due to the small sample size and the similarity among the five subjects who did participate in the study group. The third hypothesis, however was tested by dividing the 44 items into prenatal and intra/postpartum subcategories. (See Table 3) The hypothesis predicted that the most significant difference between the two groups would be in the intra and post-partum periods. This hypothesis was not supported, in fact, although there was no statistical significance ( $t=1.14$  and  $t=.25$  respectively) the mean scores were higher in the comparison group for the prenatal period, 121.8 compared to 111.8. Yet, mean scores in the intra/postpartum period were relatively similar, 57.8 for the comparison and 56.4 for the study group.

Table 3. Prenatal-Intra/Postpartum Attachment

Prenatal or Intra/PostPartum	Steps of Process
1. Prenatal	Planning Confirmation Acceptance Fetal Movement Acceptance of Fetus as an Individual
2. Intra/Postpartum	Birth Seeing and Hearing Holding and Touching Caretaking

## XII. Limitations to the Study

First and foremost, the study was limited in its' ability to establish statistical significance due to the small sample size. Secondly, Cranley's original Maternal-Fetal Attachment Tool was designed to measure prenatal maternal-fetal attachment behaviors during pregnancy, in noncomplicated cases. In contrast, this study utilized the tool to measure the same behaviors postnatally, one to four years after the birth of a child, in women who had suffered a perinatal loss. In addition, although statements were added to reflect the intra and postpartum period, the modified version of the tool was not tested statistically for validity and reliability.

## XIII. Discussion

The results of the study indicate that women who have had a previous perinatal loss and those that have not, do not differ in the way they attach to their subsequent fetus/infant. Neither in the overall attachment process nor in the individual nine steps within the process, was there significant evidence that attachment behaviors differed between the two groups. However, analysis of the responses to the open ended questions revealed some difference between the two groups.

The first question asked the participants to compare feelings about their most recent pregnancy with that of the previous one. In this case responses were relatively similar. Women who not experienced a loss, claimed they worried more

about the baby's well being during the subsequent pregnancy. The response from one woman reflected this concept, she wrote, "I felt as though my luck had run out, I couldn't have another healthy baby". Like the comparison group, women in the study group conveyed messages of anxiousness and worry in regards to the baby's well being. However, these feelings were more intense and morbid in the group who had experienced a previous loss.

Comments from the study group suggested that the subsequent pregnancy was a long, slow, anxiety filled, waiting period. Milestones such as fetal movement, hearing the heart beat, ultrasounds, and gestational ages became more significant, as they were signs that the pregnancy may result in a positive outcome. Each woman claimed to relax more after they had reached, and then passed the stage in the pregnancy in which they had lost the previous child. This particular concept is consistent with findings made by Swoiskin-Schwartz *et al*/(1988) in regards to parents who lost infants to SIDS. Three of the five women, in the study group explained that although they felt that they did attach to their baby prenatally, they did so with great hesitation. Comments such as, "I never believed the baby would be healthy and come home", "I kept waiting for someone to tell me it was a big mistake and take him away from me", "When he was born it didn't seem like it was mine", and "I had a hard time 'feeling'—I built a wall around me to protect myself" would suggest that indeed these women struggled with their ability to develop strong attachment feelings towards the fetus/infant.

Although similar in nature, the next question was more specific and in that it asked the participants how events which occurred during the previous pregnancy influenced feelings, beliefs or behaviors with the most recent one. Comments from the comparison group were reflective of the labor and delivery process during the previous pregnancy and the work and energy entailed in the role of mother. The reactions to the subsequent pregnancy were dependent upon whether the aforementioned factors were positive or negative experiences. For women in the study group reactions to their subsequent pregnancy were also dependent upon factors surrounding their previous pregnancy except in their case, these feelings were more often than not, negative in nature. The underlying theme for this group was that they felt robbed of an opportunity to be enthusiastic about being pregnant. As one woman phrased it, "It was a rip-off". It would appear then, that although there was no overt difference in the way the two groups responded to the eagerness to become pregnant, the happiness of confirming it, or the acceptance of the pregnancy, women in the study group expressed less optimism during the pregnancy. One woman said she prepared for the death of her subsequent child, she stated, "I wanted to buy premie clothes, have a camera ready to go, had a book to read the baby, music to play for the baby, and wanted to bathe it—I wanted to cram an entire lifetime into the the short time I would have with the baby before it died".

In contrast to Borg's (1981) observations, only one participant reported changing activities she engaged in with the previous pregnancy. Also, most women claimed that they did set up the nursery and bought items for the baby, however they



were afraid that their participation in such activities would curse them. All but one respondent reported feeling that the birth of their subsequent child was a joyous occasion, yet each of them reflected feelings of tension and anxiety. These findings are consistent with those of Wilson (1988) who did not find a significant difference in the way his study group responded to the birth of their baby. He too found that although these mothers are happy about the birth they also experience feelings of fearfulness, ambivalence, hesitance, and nervousness (Wilson, 1988).

Birth of the subsequent child was described as "bittersweet" by one woman. Two women claimed, that at the time of delivery, they relived the death of their previous infant and that they went through the grieving process again. One admitted questioning why her son, the subsequent child, had lived, while her daughter had to die. Although she wanted her son, she grieved for the lost daughter and the opportunity to be a mother to both. Comparison of the new baby with the previous lost one and guilt about these feelings are also congruent with Wilson's (1988) observations. Poznanski's (1972) phenomena of the "replacement child", the idea of the subsequent child living in the shoes of the lost sibling, is also an apparent underlying concept. In the midst of all the negative feelings which were expressed was one very positive response, this particular individual wrote, "My previous experiences taught me that I was stronger than I ever thought I could be and gave me the strength to go on".

The final question pertained to how, if at all, the nursing staff made a difference in either of the last two pregnancies. Both groups reported that the

nursing staff was professional and supportive. However, three of five women in the study group reported that when nurses came into a room and the woman was crying, the nurse ignored them and went about her business. This behavior by the nursing personnel was perceived by these women as insensitive and made them feel as though they were "different". Each of them expressed these were times when they felt most like letting someone know how they felt, yet the nurses never asked if they wanted to talk. Activities the women found most beneficial were knowing that they could rely on a supportive, compassionate staff who would monitor the baby or let them listen to the heart beat as often as they requested it, and who were available to talk to, by phone or in person. No one reported negative experiences relative to the care they received during their perinatal loss.

Despite the results elicited from the Maternal—Fetal/Infant Attachment Tool, there does appear to be a clear difference in the manner, by which women who have experienced a previous loss, go through the attachment process. These women are much more hesitant to establish attachment behaviors and although they engage in similar activities as other women, they do so with much anxiety. They are vulnerable to hurt and disappointment and often feel cheated out of an opportunity to participate in the normal joys and excitement of pregnancy. In essence, these women have experienced a crisis situation with their previous perinatal loss and then are engulfed with stress during their subsequent pregnancies.

#### XIV. Recommendations for Future Research

In order to determine statistical significance this research study should be replicated with a larger sample size. Since anxiety appears to be a major factor involved in subsequent pregnancies, administration of a bereavement tool and the Taylor Manifest Anxiety Scale during pregnancy, followed by correlation with results from the Maternal-Fetal/Infant Attachment Tool soon after delivery, may prove to be beneficial in capturing the true effect a previous loss has on the subsequent pregnancy. Results from these studies may lay foundation for a longitudinal study, to determine if there is an effect on parenting behaviors and personality development of subsequent children.

#### XV. Summary

The role of MCH nurses is to enhance weak factors, identify nonexistent factors and provide those factors which will promote progress toward a state of equilibrium. Within this role, nurses can assist these mothers most by understanding what events elicit anxiety. Through identification of the source of anxiety, nurses are in a better position to help the patient put their fears in perspective. Knowing the circumstances surrounding the previous loss may enable the nurse to intervene more effectively and efficiently. Initiating a phone call to a mother near the gestational period in which she lost her previous child, offers an opportunity to assess her anxiety level and coping mechanisms, provide appropriate counseling if

needed, and lets the patient know that she has a resource should she require additional assistance. Often these mothers are afraid to express the ambivalence they feel, in regards to their subsequent pregnancy, for fear they will be perceived as non-loving. As identified by mothers in this study, crying is a way to express their fear, sorrow and concern they feel. Although nurses may perceive this as a time the patient would like to be alone, it appears that this is one particular time in which the patient may be receptive to interaction with a professional. The interaction must not always be verbal; listening, touching, or simply the mere presence of a compassionate nurse may be just as effective. Understanding and acknowledgement of the patient's feelings will promote rapport and enhance the willingness to express herself honestly.

Altered perceptions in reality, surrounding perinatal death, delays adaptation to the loss and reinstatement of equilibrium in the lives of the parents, to the point that it may interfere with their ability to form strong bonds with subsequent children. Disequilibrium has the potential of inhibiting parents from raising a new child in an emotionally healthy environment (Poznanski, 1972). Crisis intervention then, can be beneficial when used to help the client develop adequate situational supports (to withstand stress): realistic perception of the event and adequate coping mechanisms. The goal of crisis intervention is to assist individual's in restoring and maintaining a sense of equilibrium. (Aguilera and Messick, 1974). Crisis intervention, therefore, is not only necessary during the perinatal loss period, but may be required during and after the subsequent pregnancy. In order to optimally

assist parents restore a sense of equilibrium, referrals for individual and family counseling and/or support groups should be encouraged for additional supportive care.

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## XVII. APPENDICES

### INFORMED CONSENT

I am conducting this study to collect information about attachment behaviors in both mothers who have previously lost an infant and those who have had healthy, living infants. The information obtained as a result of this study will facilitate the ability of health care professionals in meeting the individual needs of childbearing women.

The questionnaire consists of 44 statements reflecting attitudes and feelings women experience during pregnancy, birth, and within the first few hours after the birth of the baby. You will be asked to respond to these statements by selecting one of five alternatives. At the end of the 44 statements are three general questions which ask you to compare your recent pregnancy with the previous one. It should take approximately 30–45 minutes of your time to complete, however you may take longer if you need to. If you have previously lost an infant, answering these questions may elicit feelings of uneasiness, anxiety, sadness, or anger. If these feelings do not resolve spontaneously and you feel you need assistance please notify me or your support group facilitator. I will leave you with my name, number and address. Anyone may, at any time, choose to discontinue participation in this study.

Absolutely no names will be used in this study so that privacy and confidentiality will be maintained. If so desired, a copy of the results from this study may be mailed to you. Thank—you for your participation.

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Researcher

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Participant

Dear

Thank—you for participating in this study. I have enclosed a questionnaire, an informed consent, and a self addressed, stamped envelope. Please read and sign the informed consent. Upon completion of the questionnaire, return it along with the signed consent, in the envelope provided. Remember, the first 44 questions pertain to your most recent live birth. Also, do not write your name on the questionnaire. If you would like to receive results of this study, complete the bottom portion of this letter and return it to me with the other information.

If you have any questions or concerns please feel free to call me collect. My number is: 603-394-7617. Again thank—you for your time.

Florence Cruz, RNC, BSN, MPA  
Boston College Graduate Student

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I would like to receive a copy of the results \_\_\_\_

I would not like to receive a copy of the results \_\_\_\_



## QUESTIONNAIRE

Please respond to the following items about your feelings surrounding the pregnancy, the birth and first few hours immediately following the birth of your last child. There are no right or wrong answers. Your first impression is usually the best reflection of your feelings.

(Make sure you mark only one answer per sentence)

I thought or did the following:	Definitely Yes	Yes	Uncertain	No	Definitely No
1. I was anxious to get pregnant again.	_____	_____	_____	_____	_____
2. This pregnancy was planned.	_____	_____	_____	_____	_____
3. I was pleased to find out that I was pregnant.	_____	_____	_____	_____	_____
4. I felt all the trouble of being pregnant was worth it.	_____	_____	_____	_____	_____
5. I did things to try to stay healthy that I would not have done if I weren't pregnant.	_____	_____	_____	_____	_____
6. I ate meat and vegetables to be sure my baby received a good diet.	_____	_____	_____	_____	_____
7. I gave up certain things because I wanted to help my baby.	_____	_____	_____	_____	_____
8. I felt as though my body was ugly.	_____	_____	_____	_____	_____
9. I couldn't wait to feel the baby move.	_____	_____	_____	_____	_____
10. I poked the baby to make him/her poke back.	_____	_____	_____	_____	_____
11. I stroked my tummy to quiet the baby when there was too much kicking.	_____	_____	_____	_____	_____
12. It seemed the baby kicked and moved to tell me that it was time to eat.	_____	_____	_____	_____	_____
13. I enjoyed watching by tummy jiggle as the baby kicked inside.	_____	_____	_____	_____	_____
14. I talked to my baby.	_____	_____	_____	_____	_____
15. I wondered if the baby felt cramped inside.	_____	_____	_____	_____	_____
16. I referred to my baby by a nickname.	_____	_____	_____	_____	_____
17. I could almost guess what my baby's personality was going to be like by the way he/she moved.	_____	_____	_____	_____	_____
18. I had decided on a name for a girl.	_____	_____	_____	_____	_____
19. I wondered if the baby could hear inside.	_____	_____	_____	_____	_____
20. I had decided on a name for a boy.	_____	_____	_____	_____	_____
21. I wondered if the baby could think and feel inside of me.	_____	_____	_____	_____	_____
22. I tried to picture what the baby would look like.	_____	_____	_____	_____	_____
23. I grasped my baby's foot to make it move around.	_____	_____	_____	_____	_____
24. I could tell when the baby had hiccoughs.	_____	_____	_____	_____	_____
25. I couldn't wait until the baby was born.	_____	_____	_____	_____	_____
26. Before the baby was born I fixed a room for him/her.	_____	_____	_____	_____	_____

	Definitely			Definitely	
	Yes	Yes	Uncertain	No	No
27. Before the baby was born I bought some toys for him/her.	_____	_____	_____	_____	_____
28. I waited until after the baby was born to buy some baby clothes.	_____	_____	_____	_____	_____
29. I cleaned the house more thoroughly and stocked up with food for after he/she arrived.	_____	_____	_____	_____	_____
30. I got most of the things I needed for the baby right after he/she was born.	_____	_____	_____	_____	_____
31. I was anxious about the delivery.	_____	_____	_____	_____	_____
32. I had nightmares about labor and delivery.	_____	_____	_____	_____	_____
33. The birth of my baby was a happy experience.	_____	_____	_____	_____	_____
34. I felt as though he/she were mine the moment that I heard him/her cry.	_____	_____	_____	_____	_____
35. I really looked forward to seeing what the baby would look like.	_____	_____	_____	_____	_____
36. I wanted to see him/her right away.	_____	_____	_____	_____	_____
37. I felt as though he/she were mine the moment that I saw him/her.	_____	_____	_____	_____	_____
38. I wanted to touch him/her right away.	_____	_____	_____	_____	_____
39. I couldn't wait to hold him/her.	_____	_____	_____	_____	_____
40. I felt as though he/she were mine the moment that I held him/her.	_____	_____	_____	_____	_____
41. While pregnant, I had pictured myself feeding my baby.	_____	_____	_____	_____	_____
42. While pregnant, I imagined myself taking care of my baby.	_____	_____	_____	_____	_____
43. I eagerly wanted to begin caring for my baby.	_____	_____	_____	_____	_____
44. After the delivery I wanted to keep my baby with me.	_____	_____	_____	_____	_____

Please turn the page there are additional questions to be answered.

The following questions are to be answered in your own words, you do not have alternative responses to choose from. Please take your time and reflect back to your last two pregnancies and then respond as honestly as possible.

1. Generally speaking, how were your feelings about the most recent pregnancy similar or different than those you experienced in the previous pregnancy?

2. How did events which occurred with the previous pregnancy influence your feelings, beliefs, or behaviors with the most recent pregnancy?

3. Did the care you receive from nursing personnel make a difference in the way you felt about either one of your last two pregnancies? If so, with which pregnancy did it make the most difference and why?

The following information will assist the researcher in the analysis of the findings of this study. Again, all information provided in this questionnaire will remain confidential. Please complete or check the response which most represents your situation.

1. Age: \_\_\_\_
2. Marital Status: \_\_\_\_ Married  
\_\_\_\_ Single
3. Ethnic Background: \_\_\_\_ Caucasian  
\_\_\_\_ Black  
\_\_\_\_ Hispanic  
\_\_\_\_ Oriental  
\_\_\_\_ Other (Specify)
4. Educational Level Completed: \_\_\_\_ Did not complete High School  
\_\_\_\_ Completed High School  
\_\_\_\_ Completed two years of College  
\_\_\_\_ Completed four years of College  
\_\_\_\_ Completed more than four years of College
5. Religious Preference: \_\_\_\_ Protestant  
\_\_\_\_ Catholic  
\_\_\_\_ Jewish  
\_\_\_\_ Buddhist  
\_\_\_\_ Other (Specify)  
\_\_\_\_ No Preference
6. Number of times you have been pregnant: \_\_\_\_
7. Number of living children now: \_\_\_\_  

Dates of Birth:

If deceased, age at time of death:

a.

b.

c.

d.
8. If you have previously lost a baby, the cause of death was:  
\_\_\_\_ Stillbirth  
\_\_\_\_ Baby died after he/she was born due to being premature  
\_\_\_\_ Baby died because of congenital deformities  
\_\_\_\_ Don't Know  
\_\_\_\_ Does not apply to me

THANK YOU

## GNATT CHART

